

August 21, 2015

The Office of Research and Economic Development is pleased to announce awards received by UNC Charlotte Researchers in the month of July, 2015.

Total amount awarded for the month of July was \$11,865,146

Fiscal Year To Date Total: \$11,865,146

<b>Award Title</b>	<b>Amount</b>	<b>Investigators</b>	<b>PI Dept.</b>	<b>Sponsors</b>
<b>A Probability-Based Approach for Assessment of Roadway Safety Hardware</b>	\$4,000	<b>Principal Investigator (PI):</b> Fang, Hongbing	Mechanical Engineering and Engineering Science	<b>Sponsor:</b> Manhattan College <b>Prime Sponsor:</b> US Department of Transportation (DOT)
<b>A synthesis of social science research about the relationship of K-12 Race, SES, and immigrant Status School Diversity to Two- and Four-Year STEM Outcomes</b>	\$260,480	<b>Principal Investigator (PI):</b> Mickelson, Roslyn <b>Co-PI:</b> Bottia, Martha	Sociology	<b>Sponsor:</b> National Science Foundation (NSF)
<b>ABR-PG Sequencing the hexaploid oat genome using diploid references</b>	\$1,488,244	<b>Principal Investigator (PI):</b> Schlueter, Jessica <b>Co-PI:</b> Brouwer, Cory	Bioinformatics and Genomics	<b>Sponsor:</b> National Science Foundation (NSF)
<b>Acquisition in a World of Joint Capabilities: Methods for Understanding Cross-Organizational Network Performance</b>	\$116,389	<b>Principal Investigator (PI):</b> Brown, Mary <b>Co-PI:</b> Mohr, Zachary	Political Science and Public Administration	<b>Sponsor:</b> Department of Defense (DOD) Department of the Navy (DN) Naval Supply Systems Command (NAVSUP)
<b>ACS Project SEED 2015</b>	\$5,000	<b>Principal Investigator (PI):</b> Schmedake, Thomas <b>Co-PIs:</b> Rabinovich, Daniel; Walter, Michael	Chemistry	<b>Sponsor:</b> American Chemical Society (ACS) Petroleum Research Fund
<b>Agility In Depth: A formal framework for cyber agility composition</b>	\$70,000	<b>Principal Investigator (PI):</b> Al-Shaer, Ehab	Software and Information Systems	<b>Sponsor:</b> Department of Defense (DOD) Army Research Office (ARO)
<b>Cardinal Innovations Behavioral Healthcare Resource Database</b>	\$34,530	<b>Principal Investigator (PI):</b> Richardson, Sonyia	School of Social Work	<b>Sponsor:</b> Cardinal Innovations Healthcare Solutions
<b>Collaborative Research: Desegregation, Resegregation? Using Public Opinion Polls to Enhance the External Validity of Case Studies</b>	\$138,151	<b>Principal Investigator (PI):</b> Mickelson, Roslyn	Sociology	<b>Sponsor:</b> National Science Foundation (NSF)

<b>Award Title</b>	<b>Amount</b>	<b>Investigators</b>	<b>PI Dept.</b>	<b>Sponsors</b>
<b>Collaborative Research: I/UCRC Center for Configuration Analytics and Automation</b>	\$102,275	<b>Principal Investigator (PI):</b> Al-Shaer, Ehab <b>Co-PI:</b> Chu, Bei-Tseng	Software and Information Systems	<b>Sponsor:</b> National Science Foundation (NSF)
<b>Conceptualization and Design for an Internet Scale Messaging System</b>	\$20,000	<b>Principal Investigator (PI):</b> Ribarsky, Martin <b>Co-PIs:</b> Cho, Isaac; Shankar, Ramesh;	Computer Science	<b>Sponsor:</b> Electric Power Research Institute (EPRI)
<b>Conference: 2015 North American Power Symposium</b>	\$15,000	<b>Principal Investigator (PI):</b> Cecchi, Valentina <b>Co-PI:</b> Kamalasadan, Sukumar	Electrical and Computer Engineering	<b>Sponsor:</b> National Science Foundation (NSF)
<b>Confidential</b>	\$75,000	<b>Principal Investigator (PI):</b> Suleski, Thomas <b>Co-PI:</b> Boreman, Glenn	Physics and Optical Science	<b>Sponsor:</b> Confidential <b>Prime Sponsor:</b> Confidential
<b>Confidential</b>	\$106,535	<b>Principal Investigator (PI):</b> Manjrekar, Madhav <b>Co-PI:</b> Enslin, Johan	Electrical and Computer Engineering	<b>Sponsor:</b> Confidential <b>Prime Sponsor:</b> Confidential
<b>Development of metamaterial substrates and superstrates for conformal, electrically small antennas with radiation near the horizon.</b>	\$10,000	<b>Principal Investigator (PI):</b> Adams, Ryan	Electrical and Computer Engineering	<b>Sponsor:</b> City University of New York (CUNY) Center for Metamaterials <b>Prime Sponsor:</b> All Other Business and Industry
<b>Doctoral Consortium at the 2015 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2015)</b>	\$25,000	<b>Principal Investigator (PI):</b> Xiao, Jing	Computer Science	<b>Sponsor:</b> National Science Foundation (NSF)

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<b>EAGER: Systems Approach to Determine Adaptive Mechanisms of Thermal Tolerance in a Model Ectotherm</b>	\$149,590	<b>Principal Investigator (PI):</b> Reitzel, Adam <b>Co-PI:</b> Sokolova, Inna	Biological Sciences	<b>Sponsor:</b> National Science Foundation (NSF)
<b>EDU: Developing Security Education Materials for Future Advanced Manufacturing Engineering Workforce</b>	\$299,977	<b>Principal Investigator (PI):</b> Wang, Weichao <b>Co-PIs:</b> Browne, Aidan; Wang, Chuang; Williams, Wesley	Software and Information Systems	<b>Sponsor:</b> National Science Foundation (NSF)
<b>Environment Assisted Cracking of Graphene</b>	\$10,000	<b>Principal Investigator (PI):</b> Tabarraei, Alireza	Mechanical Engineering and Engineering Science	<b>Sponsor:</b> North Carolina Space Grant Consortium (NC Space Grant) <b>Prime Sponsor:</b> National Aeronautics and Space Administration (NASA)
<b>Environmental Assistance &amp; Pollution Prevention Office for Small Business LUESA Air Quality 2015 - 2017 Scope of Work</b>	\$60,498	<b>Principal Investigator (PI):</b> Guyer, Regina	Energy and Environmental Assistance Office	<b>Sponsor:</b> Mecklenburg County Land Use and Environmental Services Agency (LUESA)
<b>Evaluation of the Implementation of the K-3 Formative Assessments</b>	\$2,056,661	<b>Principal Investigator (PI):</b> Lambert, Richard	Educational Leadership	<b>Sponsor:</b> North Carolina Department of Public Instruction (NCDPI)
<b>Exceptional Children Regional Positive Behavior Support/Autism Consultant</b>	\$317,016	<b>Principal Investigator (PI):</b> Algozzine, Robert	Educational Leadership	<b>Sponsor:</b> North Carolina Dept of Public Instruction (NCDPI) <b>Prime Sponsor:</b> US Department of Education (DOED)
<b>Fire Ember Production from Wildland and Structural Fuels</b>	\$219,070	<b>Principal Investigator (PI):</b> Zhou, Aixi	Engineering Technology and Construction Management	<b>Sponsor:</b> Joint Fire Science Program (JFSP)

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<b>Groundwater Modeling for Corrective Action Plans</b>	\$455,082	<b>Principal Investigator (PI):</b> Langley, William <b>Co-PIs:</b> Daniels, John; Oza, Shubhashini	Civil and Environmental Engineering	<b>Sponsor:</b> HDR Engineering, Inc of the Carolinas
<b>Hybrid High Voltage AC/DC System Protection and Controls for Interfacing Off-shore Power Generations with On-shore Grid</b>	\$60,000	<b>Principal Investigator (PI):</b> Manjrekar, Madhav <b>Co-PI:</b> Chowdhury, Badrul	Electrical and Computer Engineering	<b>Sponsor:</b> UNC Coastal Studies Institute (UNC-CSI)
<b>I/UCRC for Sustainably Integrated Buildings and Sites</b>	\$93,000	<b>Principal Investigator (PI):</b> Cox, Robert <b>Co-PIs:</b> Daniels, John; Clinton, Sandra	Electrical and Computer Engineering	<b>Sponsor:</b> National Science Foundation (NSF)
<b>Ignition of Attic Insulation Materials subjected to Burning Fire Embers</b>	\$15,000	<b>Principal Investigator (PI):</b> Zhou, Aixi	Engineering Technology and Construction Management	<b>Sponsor:</b> ICL Industrial Products
<b>Investigating the Liquefaction Potential of Impounded Fly Ash</b>	\$10,000	<b>Principal Investigator (PI):</b> Pando, Miguel	Civil and Environmental Engineering	<b>Sponsor:</b> American Electric Power Company, Inc.
<b>I/UCRC for Metamaterials</b>	\$20,000	<b>Principal Investigator (PI):</b> Fiddy, Michael	Physics and Optical Science	<b>Sponsor:</b> National Science Foundation (NSF)
<b>Knife-edge Apertures 0.05mm-1mm in increments of 0.05mm in Aluminum</b>	\$4,019	<b>Principal Investigator (PI):</b> Owen, Joseph <b>Co-PI:</b> Davies, Matthew	Mechanical Engineering and Engineering Science	<b>Sponsor:</b> Magic Leap Inc.

<b>Award Title</b>	<b>Amount</b>	<b>Investigators</b>	<b>PI Dept.</b>	<b>Sponsors</b>
<b>Knife-edge Apertures 1mm-3mm in increments of 0.1mm in Aluminum</b>	\$4,963	<b>Principal Investigator (PI):</b> Owen, Joseph <b>Co-PI:</b> Davies, Matthew	Mechanical Engineering and Engineering Science	<b>Sponsor:</b> Magic Leap Inc.
<b>Large Optical Windows with High Laser Damage Threshold</b>	\$500,000	<b>Principal Investigator (PI):</b> Aggarwal, Ishwar <b>Co-PI:</b> Poutous, Menelaos	Physics and Optical Science	<b>Sponsor:</b> Department of Defense (DOD) Department of the Navy (DN) Naval Research Laboratory
<b>LCS International Film Festival - Tournees</b>	\$2,200	<b>Principal Investigator (PI):</b> Bissiere, Michele <b>Co-PI:</b> LaMarca, Mary	Languages and Culture Studies	<b>Sponsor:</b> French American Cultural Exchange (FACE)
<b>Magnetically Geared Marine Hydrokinetic Power Generation</b>	\$245,000	<b>Principal Investigator (PI):</b> Bird, Jonathan <b>Co-PI:</b> Williams, Wesley	Electrical and Computer Engineering	<b>Sponsor:</b> UNC Coastal Studies Institute (UNC-CSI)
<b>Materials Characterization Laboratory Services - Master Agreement with PCC Chemax</b>	\$100	<b>Principal Investigator (PI):</b> Weaver, Katherine	Mechanical Engineering and Engineering Science	<b>Sponsor:</b> PCC Chemax
<b>Mental Illness Stigma: Relationship processes and mental health outcomes in college students</b>	\$62,951	<b>Principal Investigator (PI):</b> Canevello, Amy	Psychology	<b>Sponsor:</b> University of Connecticut <b>Prime Sponsor:</b> NIH National Institute of Child Health and Human Development (NICHD)

<b>Award Title</b>	<b>Amount</b>	<b>Investigators</b>	<b>PI Dept.</b>	<b>Sponsors</b>
<b>Nano-cable Heterostructures for Enhanced Solar Energy Harvesting</b>	\$4,000	<b>Principal Investigator (PI):</b> Causey, F.	Energy Production and Infrastructure Center	<b>Sponsor:</b> American Public Power Association (APPA)
<b>National Technical Assistance Center on Increasing Graduation and Improving Transition to Postsecondary Education and Careers for students with Disabilities</b>	\$2,500,000	<b>Principal Investigator (PI):</b> Test, David <b>Co-PI:</b> Fowler, Catherine	Special Education and Child Development	<b>Sponsor:</b> US Department of Education (DOED)
<b>NC Space Grant Affiliate Program - NASA Funding GY2015 (Year 1 of 3)</b>	\$10,000	<b>Principal Investigator (PI):</b> Conrad, James	Electrical and Computer Engineering	<b>Sponsor:</b> North Carolina Space Grant Consortium (NC Space Grant) <b>Prime Sponsor:</b> National Aeronautics and Space Administration (NASA)
<b>NCEMC Hierarchical Load Forecasting</b>	\$55,707	<b>Principal Investigator (PI):</b> Hong, Tao	Systems Engineering and Engineering Management	<b>Sponsor:</b> North Carolina Electric Membership Corporation (NCEMC)
<b>Nonlinear absorption in thin films</b>	\$15,000	<b>Principal Investigator (PI):</b> Fiddy, Michael	Physics and Optical Science	<b>Sponsor:</b> City University of New York (CUNY) Center for Metamaterials <b>Prime Sponsor:</b> Massachusetts Institute of Technology (MIT) Lincoln Labs
<b>North Carolina Energy Efficient Home and Building Inventory Project</b>	\$15,000	<b>Principal Investigator (PI):</b> Guyer, Regina <b>Co-PI:</b> Causey, F.	Energy and Environmental Assistance Office	<b>Sponsor:</b> North Carolina Building Performance Association (NCBPA)
<b>Numerical Simulations of Turbulent Mixing due to the Richtmyer-Meshkov Instability</b>	\$4,455	<b>Principal Investigator (PI):</b> Ramaprabhu, Praveen	Mechanical Engineering and Engineering Science	<b>Sponsor:</b> Los Alamos National Laboratory (LANL)

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<b>Personnel Preparation Program in Low Incidence Severe Disabilities</b>	\$241,343	<b>Principal Investigator (PI):</b> Spooner, Fred <b>Co-PI:</b> Wood, Wendy	Special Education and Child Development	<b>Sponsor:</b> US Department of Education (DOED)
<b>PFI: AIR-TT: Video Collaboratory: A Platform for Active Viewing and Collaboration with Video Data</b>	\$199,917	<b>Principal Investigator (PI):</b> Wilson, David <b>Co-PIs:</b> Latulipe, Celine; Collins, Devin; Huskey, Sybil	Software and Information Systems	<b>Sponsor:</b> National Science Foundation (NSF)
<b>Project 1000 Tutor Training</b>	\$4,167	<b>Principal Investigator (PI):</b> Taylor, David	Reading and Elementary Education	<b>Sponsor:</b> United Way of Central Carolinas
<b>Project Early Childhood Special Education Leaders (ECSEL)</b>	\$250,000	<b>Principal Investigator (PI):</b> Correa, Vivian <b>Co-PIs:</b> Baughan, Cynthia; Smith, JaneDiane; Shue, Pamela; Algozzine, Robert; Lamorey, Suzanne	Special Education and Child Development	<b>Sponsor:</b> US Department of Education (DOED)
<b>Proposal for Supporting US-Based Students to Attend the 2015 IEEE International Conference on Data Mining</b>	\$24,000	<b>Principal Investigator (PI):</b> Ge, Yong	Computer Science	<b>Sponsor:</b> National Science Foundation (NSF)
<b>Regional EC Consultant, Exceptional Children (Education Consultant II)</b>	\$340,121	<b>Principal Investigator (PI):</b> Algozzine, Robert	Educational Leadership	<b>Sponsor:</b> North Carolina Dept of Public Instruction (NCDPI) <b>Prime Sponsor:</b> US Department of Education (DOED)
<b>RI: Student Travel Support for the 2015 International Conference on Case-Based Reasoning</b>	\$10,000	<b>Principal Investigator (PI):</b> Wilson, David	Software and Information Systems	<b>Sponsor:</b> National Science Foundation (NSF)
<b>SBIR: Innovative Deflectometry Measurement Techniques</b>	\$185,362	<b>Principal Investigator (PI):</b> Davies, Angela <b>Co-PI:</b> Evans, Christopher	Physics and Optical Science	<b>Sponsor:</b> SURVICE Engineering Company <b>Prime Sponsor:</b> National Aeronautics and Space Administration (NASA)

<b>Award Title</b>	<b>Amount</b>	<b>Investigators</b>	<b>PI Dept.</b>	<b>Sponsors</b>
<b>Science of Security Lablet</b>	\$118,550	<b>Principal Investigator (PI):</b> Al-Shaer, Ehab	Software and Information Systems	<b>Sponsor:</b> North Carolina State University (NCSU) <b>Prime Sponsor:</b> Department of Defense (DOD) National Security Agency (NSA)
<b>Shaping the Message: African American Youth and their Families Use Media to Promote Violence-Free Dating Relationships</b>	\$30,000	<b>Principal Investigator (PI):</b> Kulkarni, Shanti	School of Social Work	<b>Sponsor:</b> NIH National Institute of Child Health and Human Development (NICHD)
<b>SHRP 2 Education Connection</b>	\$9,996	<b>Principal Investigator (PI):</b> Fan, Wei	Civil and Environmental Engineering	<b>Sponsor:</b> Federal Highway Administration (FHWA)
<b>Statistical Methods in HIV Vaccine Efficacy Trials</b>	\$94,575	<b>Principal Investigator (PI):</b> Sun, Yanqing	Mathematics and Statistics	<b>Sponsor:</b> Fred Hutchinson Cancer Research Center <b>Prime Sponsor:</b> NIH National Institute of Allergy and Infectious Diseases (NIAID)
<b>Technical Assistance Project: Air Void Analysis of Concrete</b>	\$6,776	<b>Principal Investigator (PI):</b> Cavalline, Tara	Engineering Technology and Construction Management	<b>Sponsor:</b> North Carolina State University Institute for Transportation Research and Education (ITRE) <b>Prime Sponsor:</b> North Carolina Department of Transportation (NCDOT)
<b>The S.A.F.E.R. (Student-Athletes for Education and Responsibility) Program</b>	\$10,000	<b>Principal Investigator (PI):</b> Ramey, Rachel <b>Co-PI:</b> Robinson, Leslie	Athletic Advising	<b>Sponsor:</b> MillerCoors
<b>Towards Smartphone Actuated Optical Lab-on-a-Chip Devices</b>	\$150,000	<b>Principal Investigator (PI):</b> Akella, Srinivas	Computer Science	<b>Sponsor:</b> National Science Foundation (NSF)



<b>Award Title</b>	<b>Amount</b>	<b>Investigators</b>	<b>PI Dept.</b>	<b>Sponsors</b>
<b>Toxin expression and function by an estuarine model species in a dynamic seasonal community</b>	\$498,975	<b>Principal Investigator (PI):</b> Reitzel, Adam	Biological Sciences	<b>Sponsor:</b> National Science Foundation (NSF)
<b>University of Puerto Rico - Mayaguez CREST Evaluation</b>	\$8,000	<b>Principal Investigator (PI):</b> Dika, Sandra	Educational Leadership	<b>Sponsor:</b> University of Puerto Rico Mayaguez Campus <b>Prime Sponsor:</b> National Science Foundation (NSF)
<b>XRD analysis of coal ash</b>	\$3,707	<b>Principal Investigator (PI):</b> El-Ghannam, Ahmed	Mechanical Engineering and Engineering Science	<b>Sponsor:</b> CeraTech USA, Inc.
<b>Mid-spatial frequency specification and characterization for freeform surfaces</b>	\$19,763	<b>Principal Investigator (PI):</b> Davies, Angela	Physics and Optical Science	<b>Sponsor:</b> University of Rochester <b>Prime Sponsor:</b> All Other Business and Industry
<b>The Solutions Project: Teaching Students with Moderate/Severe Intellectual Disability to Solve Mathematical Problems</b>	\$1	<b>Principal Investigator (PI):</b> Browder-Boswell, Diane	Special Education and Child Development	<b>Sponsor:</b> US Department of Education (DOED) Institute of Education Sciences (IES)